



UNITED STATES NAVY

MEDICAL NEWS LETTER

Editor - Captain L. B. Marshall, MC, USN

Vol. 16

Friday, 20 October 1950

No. 7

TABLE OF CONTENTS

Food Poisoning from Eels	2	Chloramphenicol in Trachoma....	17
Surgery in Sickie-Cell Anemia	5	Aureomycin in Neurosyphilis	19
Sickle-Cell Anemia in White Race	8	Tularemia from Domestic Water..	19
Surgery in Intractable Colitis	9	Naval Institute Membership	21
Hypersplenism	11	Food Service Course	21
Diagnostic Culdoscopy	12	H. C. Study Material	21
Treatment of Brain Abscess	15	Registry of Leprosy	23
Craniotomy Drill	16	Recent Research Reports	23
		From the Note Book	24

Circular Letters:

Establishment of U. S. Naval Hospital, Yokosuka, Japan	SecNav	26
Optometric Fabrication; Specialization Course in	BuMed	26
Environmental Sanitation Technic; Course in	BuMed	27
Naval Aviation Observer; Physical Standard for	BuMed	27
Survey of Supervisory Mechanical Service Ratings	BuMed	28
Fiscal Services Work Measurement Program	BuMed	28
Blood Program for the Navy Department	BuMed	30
Members Awaiting Action of SecNav on P.E. Boards	BuMed	31
Joint Utilization of Armed Forces Medical Facilities	Joint Ltr	32
BuMed Circular Letters; Cancellation of	BuMed	35
BuMed Circular Letters; Cancellation of	BuMed	36

* * * * *

Seventeen Cases of Poisoning Due to Ingestion of an Eel, *Gymnothorax flavimarginatus*: This report concerns an episode of acute fish poisoning, the victims being Filipino civilians, which occurred on Sunday, 8 May 1949, at Saipan. Several Filipinos caught an eel, *Gymnothorax flavimarginatus*, which measured about 6 feet long and about 1 foot thick and is one of the most poisonous fish in Saipanese waters. At camp the eel was cleaned and then cut into steaks and one half of the sliced eel, together with the head, was placed in a large pot of water and boiled for 30 minutes, adding black pepper, vinegar and salt. Each slice of eel was enough for 4 men and each plate had one fourth of a slice of eel steak (including the skin) plus some broth from the pot. The feast was consumed by 57 Filipinos at about 1900 hours. On placing the fish in the mouth, a scratchy sensation in the mouth and throat was noted immediately. About 20 minutes later tingling and numb sensations about the lips and tongue were experienced. Approximately 30 minutes after ingestion of the eel, some of the Filipinos were unable to talk, and at this time the entire group of 57 became alarmed and went to the dispensary on Saipan where each one had a gastric lavage. One and one-half hours after ingesting the eel, some experienced syncope and fell down, about 20 were shouting, and during their stay at the dispensary 50 vomited. After 4 hours at the Saipan Station Hospital, all patients were sent back to their camp. On Monday and Tuesday all had numbness and tingling of their hands and feet and continued numbness of their mouth, with some unable to talk. They fed some of the cooked eel to 2 dogs on Sunday night, and by Monday morning both were dead. The Filipinos remained in bed Monday and Tuesday, and on Wednesday, about 50 were unable to talk and they were taken back to the Saipan Dispensary on litters. By this time it was decided to evacuate the sickest. On Wednesday, 11 May 1949, at 1400 hours, 12 patients were received at the 22d General Hospital, Guam, by air from Saipan. Eleven were in coma and 1 was semi-conscious.

On arrival at the 22d General Hospital they presented a picture of coma with no irritability. One of the 12 became conscious and talked, but he still had numbness and tingling about the mouth, tongue, hands and feet. As a whole, in the beginning, the striking feature was the decreased ability of function of the respiratory chest muscles, with only function of the diaphragm. Abdominal breathing was present and the thoracic excursions were almost completely absent. They all had a picture of acute conjunctivitis, 3 had conjugate deviation of the eyes to the right, several had periorbital edema, several had absent pupillary reflexes and others had sluggish pupillary reflexes. Temperatures were normal or only slightly elevated, except for 1 whose temperature was 103.8° F. rectally. Heart and lungs were normal with blood pressures averaging about 110/80. The neurological examination revealed absent biceps and triceps with most having abdominal reflexes present and absent patellar and Achilles reflexes and negative Babinski's signs.

As the patients were examined and stimulated, they started to develop a few convulsions, clonic and tonic in type, several extremely severe. They

were all given intravenous fluids, 1,000 cc. of 5 percent glucose in saline, followed by 1,000 cc. of 5 percent glucose in water. Within 1 to 2 hours after the fluids were begun, half of the patients became conscious. The half who were still unconscious had depressed respiration, mostly abdominal, and developed collection of mucus with foaming at the mouth.

About 2000 hours on Wednesday, the conscious Filipinos began to develop convulsions one by one. Frothing of the mouth and tonic and clonic convulsions ensued. Some of them cried out as if in pain. Some of those who continued in coma also began to develop convulsions. The majority while in convulsions would also develop a profuse diaphoresis, excreting from 500 to 1,000 cc. of perspiration within a few minutes. This muscarine effect of profuse sweating and nicotinic effect of skeletal muscle stimulation was repeated over and over again for several days. Fluids were started again on some, and in order to control convulsions, paraldehyde had to be given intramuscularly, and sodium amytal for a few intravenously. Several received large doses of paraldehyde to control their frequent convulsions. By midnight of Wednesday, many of these patients required tracheal tubes to assist in respiration and aspiration of the mucus.

About 1900 hours on Wednesday, 11 May 1949, 5 more patients were brought in by plane from Saipan. All of these were conscious on admission. One of these had a very severe pruritis and developed large welts over his body and for this he was given adrenalin. By 0200 hours on Thursday, 3 of these also became convulsive, the one with pruritis the most severe. The 2 who were conscious still complained of numbness about the face, mouth, tongue, coldness of the face, and tingling of the hands and feet. At 0400 hours on Thursday, 12 May 1949, 14 of the 17 patients had to have the foot of their beds elevated in order to assist draining of the mucus which had become profuse and it was noted that respiration was much improved when a pillow was placed beneath their shoulder blades. Many had to be aspirated frequently of mucus, and several developed Cheyne-Stokes respiration. The frequent aspiration of mucus, convulsions, and incontinence were a major nursing problem.

Symptoms, Signs, and Physical Findings. Eleven of the 17 patients had conjunctivitis on admission, 1 had periorbital edema, 6 exhibited conjugate deviation of the eyes to the right, 3 had absent corneal reflexes, 6 had meningismus, 12 had total or partial loss of deep reflexes, 10 had absent superficial reflexes, none had pathological reflexes, 12 had mucus on admission, and 2 developed a collection of mucus later on.

A striking sign was the absence of thoracic respiration with prominent abdominal breathing. Thirteen patients exhibited this sign, and the thoracic respiration became normal for 6 in 7 days, for 2 in 6 days, 1 in 4 days, 2 in 3 days, and 1 in 1 day. Ten patients developed rapid respiration, some as

high as 70 per minute, 8 had a rapid pulse, and 7 had temperatures of over 105° F. Temperature, pulse, and respiration became normal in from 3 to 18 days. The duration of unconsciousness varied from 2 to 10 days. One patient died after 20 days without regaining consciousness, and 1 died after 14 days, having been conscious for 2 days. Both at autopsy showed bilateral bronchopneumonia.

Treatment. Treatment was symptomatic. For the convulsions paraldehyde was the drug of choice. Sodium amytal was used in a few cases but was not well tolerated. Drop ether was used in 2 cases with good results. Eight patients developed profuse mucus, trismus, and laryngeal paralysis which necessitated intubations. The majority were given curare prior to intubation. Those intubated had a longer convalescence on the whole.

Five patients received nasal oxygen, 10 received penicillin, and of these 10, there were 7 who were given streptomycin as well. Intravenous fluids were given to the majority, varying between 2,000 cc. and 4,000 cc. a day, the fluids being supplemented with parenteral vitamins.

It was found that atropine, which was given parenterally in the beginning, made the mucus more viscid and hard to aspirate, and since no benefit was derived, this was discontinued. Three received whole blood. Two were placed on digitalis therapy because of cardiac failure. Three developed pulsus alterans which was quite marked for 2 days.

Sequelae. The patients were able to be up and about in from 1 to 4 days after they were able to talk. In those who were not conscious and those who were unconscious but a short time, the tingling sensations of the hands and feet cleared up in 2 to 8 days. After the patients got up certain signs and symptoms persisted for several days. Five had a positive Romberg sign, 7 complained of dizziness, 5 had blurred vision, 3 had tremor of the hands, and 1 had sensory changes in the legs. These cleared up before discharge. Two after 2 months developed alopecia. Areflexia continued for from 2 days to 3 months.

Three patients developed interosseous atrophy, 3 had muscular weakness, 1 an ulnar palsy on the right and 1 a bilateral ulnar palsy. Two developed foot drop. Two developed radial weakness, 1 right-sided and 1 bilateral. One had his tongue deviate to the left with the same side of the tongue showing atrophy. All these have improved or cleared up.

The poisonous fish ingested was an eel of the genus Gymnothorax. They are found in large numbers in the South Seas, especially in coral reef areas. During the day they remain hidden in the coral reefs and at night swim out to procure food. They have been known to bite, although there is no poisonous duct to be found near their teeth. The most poisonous eel species is known as

Gymnothorax flavimarginatus and is to be found from East Africa across to the Indian Ocean, South Seas, Philippines, and Hawaiian areas.

The Japanese performed experiments with this eel and found the poison to withstand heat, and that the poison did not weaken after the fish was cooked or grilled. The poison is not destroyed even when it is heated to 100° C. for 10 minutes. The poison is also water soluble; therefore, soups of eels are highly poisonous.

Investigation is being conducted on eels caught around Saipan to determine the nature of the poison. It behaves as a quaternary ammonium compound. Both muscarine and nicotinic effects were noted in the 17 patients hospitalized.

Several theories are advanced concerning the cause of the poison. It has been attributed to poisonous seaweeds, poisonous crabs, poisonous coral animals, and poisonous small fish. The Japanese found no definite connection between the feeding habits of any species of poisonous fish and its toxicity, and they were also unable to discover any certain relationship between ecology and toxicity. Some species feed on coral, some on small fish, some on shellfish, and others eat large fish. Some swim in the surface waters like barracuda, and some live in holes in the coral like morays. In studying the distribution of poisonous fish, one finds that the distribution is almost restricted to tropical seas, noted mostly in Saipan, the Marshalls, and eastern Carolines.

As far as is known this is the first episode in which so many people were poisoned by a fish, that so many were in coma, and the coma lasted for such a length of time. (Am. J. Trop. Med., September '50, C. T. Khlentzos)

* * * * *

Sickle-Cell Anemia. A Surgical Problem: Sickle-cell anemia is a disease of surgical as well as medical interest. Wilson, Patterson, and Diggs recently summarized the essential features of surgical interest exhibited by these patients and again emphasized the importance of the disease as a cause for acute abdominal symptoms. The abdominal pain which these patients frequently experience may suggest the possibility of intussusception, intestinal obstruction, acute appendicitis, perforation of a hollow viscus, or cholecystitis.

Characteristics of Sickle-Cell Anemia. Approximately 10 percent of Negroes inherit the sickle-cell trait (sickleemia) which is most easily diagnosed by observing the morphologic changes in erythrocytes when a drop of blood is sealed under a cover slip, or when blood is mixed with a reducing agent such as sodium bisulfite. Most of the individuals with sickle-cell trait have no significant anemia, no evidence of increased red cell destruction, and are not incapacitated by their abnormality. Within the group of those who inherit the sickle-cell trait, approximately 1 in 40 have sickle-cell anemia.

The diagnosis of sickle-cell anemia can be readily made by the combined history, physical examination, demonstration of the sickle-cell trait, and the usual laboratory examinations. The anemia is usually of a normocytic, normochromic type. Oval, elliptical, target, and crescent (sickle) forms are demonstrable in the stained blood smear; nuclear fragments, nucleated red cells, and diffusely basophilic cells are present as are leucocytosis and thrombocytosis; the reticulocyte count is increased; and jaundice is usually clinically demonstrable. It is of a hemolytic type in most cases, but there may be severe liver injury in addition to increased red cell destruction with varying degrees of regurgitant jaundice. The sedimentation rate may be normal in spite of severe anemia. The bone marrow is hyperplastic. The red cells are more resistant than normal to hypotonic salt solutions.

Other helpful diagnostic points are the occurrence of the sickle-cell trait and anemia with jaundice in other members of the family, onset in infancy with recurrent febrile episodes, pains in any part of the body, most frequently in the bones and joints simulating rheumatic fever and in the abdomen simulating acute surgical conditions, signs of central nervous system involvement, chronic leg ulcers, tendency toward hypogonadism, long extremities with relative shortening of the trunk, hepatomegaly, splenomegaly early with atrophy later, enlarged heart with systolic murmur, and roentgenographic bone changes.

The multiple and extremely varied signs and symptoms are in part due to the anemia but are also due to occlusive vascular phenomena. The erythrocytes in this disease become elongated and distorted when they are subjected to conditions of reduced oxygen tension. Associated with the shape change there is increased viscosity of the blood with retardation of flow. Any condition, local or systemic, which favors vasoconstriction, anoxia, or stasis favors sickling and thus sets up a vicious cycle with injury or necrosis of tissues resulting. At autopsy the common findings are congestion of capillaries with sickled erythrocytes, thrombosis, infarction, parenchymal degenerative changes, necrosis, and fibrosis.

Between the 2 extremes of those who have the sickle-cell trait with no anemia and those who have severe sickle-cell anemia of a hemolytic type, there are occasional patients who have mild anemia, who develop variants of the sickle-cell syndrome late in life and who have sudden and otherwise unexplained deaths following anesthesia, alcoholic stupor, infectious states, and mild shock states. The sickle-cell trait in all of the variants should be considered as a fairly common disease rather than as an unimportant hematologic curiosity.

Cerebral Complications of Sickle-Cell Anemia. Vasospasm, vascular blockage with sickled cells, thrombosis, and hemorrhagic phenomena in the brain and cord produce varied and often severe central nervous system manifestations which simulate numerous disease entities. The surgeon and neurosurgeon will be called upon to aid in the diagnosis and management of patients

with severe pain, headaches, convulsions, paralyses, psychic changes, and coma; it is therefore important for them to be aware of the potentialities of sickle-cell anemia. A patient with sickle-cell anemia who has acute abdominal or other surgical symptoms may have concomitant central nervous system manifestations. Awareness of sickle-cell anemia as a disease capable of involving multiple systems of the body will aid in establishing the correct diagnosis and avoid consideration of a local disease requiring surgical intervention.

Of the 142 patients studied by the authors at the John Gaston Hospital, 57 showed signs or symptoms referable to the central nervous system. Headache was a frequent and bothersome complaint, having been present in 26 cases. Dizziness, drowsiness, and irritability were less common and more transient in nature. Faintness and recurrent syncope were seen in 2 patients. The more serious findings of paralysis, convulsions, coma, and stiff neck have been mistaken for meningitis, poliomyelitis, or encephalitis.

The cerebrospinal fluid from some of these patients with sickle-cell anemia who had signs of cerebral involvement were normal. In others there was an increase in manometric pressure, neutrophilic pleocytosis, and an increase in protein. Red blood cells were present in several others. Variable cerebrospinal fluid has been observed in this series and in those reported by others because the lesions are often small and do not involve the meninges, or may be recurrent in an area of old injury in which there is local occlusion of the subarachnoid space and therefore no indication of pathologic process when fluid is removed by lumbar puncture.

In this series 7 patients who had central nervous system manifestations died. The most common autopsy finding was engorgement of the blood vessels with erythrocytes with focal degenerative changes. Definite thromboses were demonstrable in 3 cases. In the majority of the cases the maximal involvement occurred in the gray matter and meninges, but in 1 patient there were focal areas of hemorrhage and necrosis in the white matter. In the older lesions there was gross atrophy and scarring.

Urogenital Complications in Sickle-Cell Anemia. Two patients in the series were admitted to the urological service because of flank pain and gross hematuria. Pyelography did not demonstrate any abnormality in the urinary tract and response to symptomatic treatment was prompt. Although many of the patients complained of passing red urine, blood was not found on routine admission urinalyses. The dark urine noted by the patients was probably pigment from increased hemolysis of red cells.

Bone-Joint Problems in Sickle-Cell Anemia. The predominating complaint in this series of patients with sickle-cell anemia was bone and joint pain. Episodes of severe, migratory joint pains with associated fever and leucocytosis in some patients suggested rheumatic fever or infectious arthritis at the time of hospital admission. Pain may be localized in a single bone

and when localized tenderness, fever, and leucocytosis are present, leads to a diagnosis of osteomyelitis and to subsequent surgical operation. More detailed studies reveal the proper diagnosis of sickle-cell anemia. Aseptic necrosis with collapse of the femoral head has been observed in these patients. These findings result from the pathologic changes found elsewhere, that is, severe stasis, thrombosis with infarction, and necrosis.

Not all patients with sickle-cell anemia show x-ray evidence of bone changes. The bones most likely to show changes are the skull, vertebrae, femur, tibia, and fibula. The characteristic skull changes are an increase in the thickness of the bone, absence of a well-defined outer table, osteoporosis, and radiating trabecular striations. Flattening and biconcavity of the vertebral bodies may occur and there may be collapse of the vertebrae. The long bones and bones of the hand and feet may show patchy osteoporosis, but osteosclerotic lesions with replacement of marrow cavity predominate in these bones. In 4 patients this diagnosis was suggested by x-ray findings prior to the time of blood examination.

Leg Ulcers. Since the earliest reports of this disease leg ulcers have been described as a common finding. In this series ulcers or ulcer scars were noted in 42 patients. In the authors' experience these lesions are more likely to develop in adults than in children. The ulcers appeared most commonly about the ankle and lower shin, although they also have been observed on various parts of the leg. They may be single or multiple, unilateral or bilateral, and are usually "punched-out" in appearance. They are characterized by their chronicity and resistance to treatment. One patient whose predominant complaint was leg ulcers has had 21 hospital admissions because of this condition. Ointments, bed rest with elevation of the extremities, pressure dressings, excision with skin graft, and sympathectomy were used in attempt to cure these ulcerations. Temporary healing resulted after long periods of hospitalization, only to be followed repeatedly by a recurrence of the ulceration in a relatively brief period of time. (Surgery, August '50, R. H. Patterson et al.)

* * * * *

Sickle-Cell Anemia in the White Race: Sickle-cell anemia is predominantly a disease of the Negro race, but both sickle cell anemia and sickle-cell anemia have occurred in persons in whom there can be no reasonable suspicion that admixture of Negro blood has occurred. Fourteen well-documented cases of sickle-cell anemia occurring in white individuals have been recorded. Several other cases have been reported in which family studies were not done and in whom the possibility of the presence of Negro blood is strong. There is no doubt that both sickle cell anemia and sickle-cell anemia are inherited, but none of the prevalent genetic theories is applicable to all the reported cases. Further accumulation of data is desirable to establish the genetic pattern of the disease.

In this report the occurrence of sickle-cell anemia is described in a white individual in whom all available relatives were studied for the sickling trait and sickle-cell anemia. Study of the 9 available members of her family revealed the sickling trait in the patient's mother, brother, a maternal aunt, and 2 maternal uncles, none of whom had anemia or history or physical findings suggestive of sickle-cell anemia. Her maternal grandfather, an uncle, an aunt, and a cousin were found to be normal.

It is unfortunate that in the case here reported the patient's father was not available for study, so that support could have been given to one of the possible genetic theories. There can be no doubt that there is a hereditary factor responsible for the sickling trait which was present in some of the maternal members of this family. No members of the family had any negroid characteristics and there was no known admixture of Negro blood in the family history. However, as in all reported cases of sickle-cell anemia in the white race, which occur with only one exception in individuals from the region around the Mediterranean Sea, the possibility of remote admixture with Negro blood cannot be absolutely excluded. (Am. J. M. Sc., September '50, R. A. Guyton and R. W. Heinle)

* * * * *

The Selection of an Operative Procedure for Patients with Medically Intractable Ulcerative Colitis: Standardization in the management of chronic ulcerative colitis has not been possible. Patients do not react similarly to specific regimens. The etiology of idiopathic ulcerative colitis has not been determined and its course is unpredictable. In the severer forms of the disease, constituting about 20 percent of cases, medical management has proved insufficient. All advanced, seriously ill patients should have the benefit of early surgical supervision, and an intimate surgeon-patient relationship must be established. A technic of flexible surgical management (based chiefly on primary colectomy with ileostomy in one stage) is submitted which has been found by the authors to be of much practical merit.

Decisions to operate cannot always be based entirely upon objective findings, or upon arbitrary criteria. Surgical intervention, frequently reserved as a lifesaving and emergency undertaking, is urged for those patients whom conservative medical methods maintain as chronic invalids. When the disease reaches a pathologically advanced state, surgical interference becomes obligatory. In the authors' series, 45 (18 percent) of 249 patients with ulcerative colitis had disease which necessitated surgical intervention. In these 45 patients, ileostomy was done in 28 patients, ileosigmoidostomy in 3, colectomy in 22, abdominoperineal excision in 17, and 17 had miscellaneous operations. Death occurred only in the ileostomy group, in which the mortality rate is ordinarily exceedingly high. Four of the 28 patients died, making an ileostomy mortality rate of 14.2 percent, and an overall mortality rate of 4.6 percent.

Apart from the high medical mortality rate in ileostomy, it is pointed out that ileostomy is not a curative procedure in itself, and should be followed by colectomy. However, in the acute fulminating forms of the disease, ileostomy is not to be entirely condemned, since it can prove to be a lifesaving measure, particularly when supported by intensive blood transfusions (sometimes numbering between 20 and 30 pints) and antibiotic therapy. Such heroic regimen may even include the performance of a single loop ileostomy under local anesthesia in advanced, acutely ill patients.

Colectomy is frequently elected in cases in which the disease has become medically irreversible. The indications for this procedure, while not rigidly standardized, are, in general: persistent sepsis and toxemia that continues despite heroic medical effort, pericolic abscesses and fistulas, impending perforation, structures with partial or complete obstruction, pseudopolypoid degeneration, carcinoma, and persistent, painful anorectal disorders. Requiring slightly more latitude are such secondary dysfunctions as arthritis, anemia, dermatoses, impending acute liver degeneration, and degenerative changes in other organs. Although the medical invalid, subject to periodic exacerbations of severe colitis must be considered a candidate for colectomy, one must be mindful of the dangers and possible complications entailed in performing this operation, as well as the dangers of carcinomatous degeneration. Carcinoma is apparently particularly prone to occur in the colon that has most frequently undergone repeated attempts at healing following repeated degenerative exacerbations. When carcinoma does complicate ulcerative colitis, the prognosis is usually hopeless.

It has been the authors' recent practice to perform primary colectomy with ileostomy instead of the usual multiple stage operations. Colectomy is defined as the complete extirpation of the colon, including a segment of terminal ileum down to the midsigmoid. The sigmoidal stump is brought through the lower pole of the abdominal incision to form a temporary sigmoidostomy, and the proximal ileal stoma provides the permanent ileostomy. This technic is by no means rare, having been described in many of the older textbooks, and its advantages are many. The patient is subjected to fewer operations, and his improvement is more rapid than following ileostomy alone. The operation may be carried out unhindered by the scars and adhesions of previous surgery, and free from the necessity of circumventing or revising the previous ileostomy. The risk of contamination by material from the stomas of the existent ileostomy is avoided. Fewer complications referable to ileostomy following primary colectomy than after ileostomy alone have been noted. The risk of infectious processes arising from the diseased large bowel is eliminated, and adhesions are fewer and less dense.

Excision of the rectum is recommended for all cases, with the possible exception of those rare instances in which there has at no time existed any apparent rectal involvement. Depending upon the condition of the patient and

the severity of the rectal involvement, an interval of one to several months is allowed before abdominoperineal excision is elected. In a few selected cases in which the rectum and low sigmoid are free from disease, ileorectostomy or ileosigmoidostomy may be carried out.

Vagotomy has been reserved mainly for those patients who in the course of their illness have failed to respond to medical treatment, but do not present the picture of advanced disease with scarring and fibrosis. It is considered ineffectual where narrowing of the bowel lumen has occurred. Its rationale has not been made entirely clear, and conclusions relative to its value cannot as yet be drawn.

Rehabilitation, defined as a complete return to usual activities and occupation without reservations, was successful in 86.3 percent of the authors' patients undergoing colectomy. (Surg., Gynec. & Obst., October '50, H. E. Bacon and H. D. Trimpi)

* * * * *

Hypersplenism: It has been suggested that the term hypersplenism be used. The concept of the existence of hematologic conditions usually associated with splenomegaly and resulting from an exaggerated function of the spleen is presented. It is doubtful that the concept of primary hyperfunction of the spleen can be supported. Rather, it appears that, owing to a variety of causes originating external to the spleen, the organ may become secondarily enlarged and its function increased. The number of recognizable causes of secondary splenomegaly associated with anemia, leukopenia, and thrombocytopenia suggests this interpretation. In congenital hemolytic jaundice the red cell effect is clearly primary and persists after splenectomy. With congestive splenomegaly of origin internal or external to the liver, or a spleen enlarged by infiltration of Gaucher's cells, leukopenia and thrombocytopenia are common. In various instances of acquired hemolytic jaundice, agglutination of the red cells, augmented by slight lowering of the pH of the serum is observed.

There is no general agreement concerning the definitive diagnostic criteria of hypersplenism. Splenomegaly with anemia, leukopenia, and thrombocytopenia is common to such diverse conditions as refractive anemia with hyperplastic bone marrow, aleukemic myelogenous leukemia, and disseminated lupus; the diagnosis of hypersplenism is possible only in retrospect when splenectomy affects a change toward normal in the blood picture. (Editor, Year Book Med., 1950, Remarks.)

Functional overactivity of the spleen (hypersplenism) includes a variety of hematologic syndromes, with multiple clinical pictures, in which the spleen

has the capacity to destroy various blood cells. These syndromes include acute and chronic splenic neutropenia, acute and chronic splenic panhematopenia of congenital and acquired types, familial hemolytic icterus, and idiopathic thrombopenic purpura.

In cellular destruction, the spleen is the most important organ in the body. In addition to removing cellular elements from the blood by phagocytosis and ultimate destruction, the spleen is also capable of removing large masses of cells from the vascular system by enlargement and sequestration of the cells in the dilated and engorged organ. It is a reservoir, the chief function being to store blood; yet this function may become perverted and excessive numbers of cells removed from the vascular system, resulting in depleted cellular values in peripheral blood.

Most circulating blood cells are produced in bone marrow, which has a tremendous reserve capacity for producing blood cells. The relation of marrow production and splenic destruction may be summarized as follows: normal marrow production plus normal splenic destruction produces normal cellular equilibrium; impaired production plus normal destruction causes depleted cellular elements; normal production plus excessive destruction causes depleted cellular elements. The spleen may be hyperfunctional for many years, but if the cellular destruction is not too great, the marrow may be able to maintain normal cellular values. Only when marrow decompensation occurs do signs of anemia, thrombopenia, and neutropenia appear.

Diagnostic criteria for hypersplenism include: (1) a spleen clinically enlarged, the single exception being some cases of essential thrombopenic purpura; (2) depleted cell values in the blood, including neutropenia, thrombopenia, anemia or various combinations of these; (3) demonstration of unimpaired bone marrow production; and (4) demonstration of splenic overactivity by the epinephrine test. The basic problem is to determine whether or not the spleen is destroying more cells than it should and whether or not the bone marrow is capable of producing the normal number of cells to support the particular patient. The danger of leaving the spleen in the patient can then be weighed against the risk of removing it. (1950 Year Book Med., R. R. Kracke and W. H. Riser, Jr.)

* * * * *

Diagnostic Culdoscopy: Culdoscopy is a procedure for the visualization of the pelvic organs by means of an optical instrument introduced through the posterior fornix which permits a view of the pelvic organs without subjecting the patient to a laparotomy.

A pneumoperitoneum effective enough to keep the loops of bowel out of the pelvis can be produced by utilizing the negative intra-abdominal pressure

created by assuming the knee-chest posture. The amount of air entering the abdomen may measure from 800 to 1,500 cc.

The patient is placed in the knee-chest position. If the culdoscopic examination is to be made with the patient awake, as most of the author's were, she can then maintain the position unsupported for 30 or 45 minutes, more than long enough to complete the examination by a number of observers. If the patient is given general anesthesia, she can be held in the knee-chest position by having a nurse or intern stand on either side of her with the adjacent arm encircling the patient's thigh. This requires almost no effort. Unless a dilatation and curettage or a possible laparotomy are planned, the patient is not shaved and the vaginal preparation is of the simplest (a nonirritating antiseptic solution to swab out the vaginal tract is used). The vulva, the buttocks, or the anal region are not prepared.

Most of the patients have been culdoscoped under local anesthesia by injecting about 5 cc. of a 1 percent procaine solution into the posterior vaginal fornix at the site of the puncture, which is the point of greatest concavity. For general anesthesia intravenous pentothal sodium is used. Caudal and spinal anesthesia have also been used successfully. A number of patients have been culdoscoped with some preoperative medication only. The type and amount of anesthesia must be adjusted to the patient's psyche. Recently, 100 mg. of demerol intravenously preceding the injection of the local anesthetic has been used, permitting the use of local anesthesia even in the most apprehensive patients. All patients but 1 who have been examined thus far have been admitted to the hospital overnight. This 1 patient left the hospital 2 hours after the culdoscopic examination and when seen later said she had felt no ill effects.

Having the patient in the knee-chest position, the perineum is elevated by a Sim's speculum. A tenaculum is placed on the posterior cervical lip and the trocar is directed to the point in the vaginal vault where the concavity is greatest. A sudden quick puncture easily perforates the posterior fornix. The wall of this fornix is very thin, consisting only of the vaginal wall, a thin layer of endopelvic fascia, and peritoneum. Successful puncture of the cul-de-sac is proved by the sound of inrushing air on removing the trocar; the cannula is left in place. The sterile culdoscope is then introduced through the cannula.

The ovaries and the posterior surface of the uterus come into view very readily. The complete visualization of the normal tubes is not always as readily demonstrable. The cervix can be manipulated to bring the anterior surface of the uterus into view and if the bladder is partially distended it, too, can be seen.

At this point in the examination one can resort to the dye test for tubal patency. The author's experience with this test has not been satisfactory,

perhaps because of lack of sufficient experience. In the few sterility cases in which it was tried and the tubes were thought to be closed, 2 patients proved the author wrong by promptly becoming pregnant.

When the examination is completed, the culdoscope is removed and the cannula left in place, and the patient lies on her abdomen permitting the abdominal air to be expelled. Making pressure on the patient's abdominal wall will help in expelling some of the retained air. The cannula is then removed. The wound in the cul-de-sac is not sutured. In only 1 instance the patient returned to her doctor 10 days after culdoscopy because of bleeding at the site of the puncture; 2 sutures were taken to control the bleeding.

The amount of postculdoscopy discomfort varies directly with how completely the abdominal air is expelled. It varies from none to moderately severe discomfort for a day or two. The usual complaint is of a slight general muscle soreness and/or some shoulder pain.

The indications for culdoscopy are many. Foremost are those cases in which the history and/or pelvic findings suggest tubal pregnancy. Of the 96 cases on which this report is based, in 25 the history and pelvic findings were so suggestive of ectopic pregnancy that an attempt at an absolute diagnosis had to be made. In only 10 of these patients was the diagnosis of ectopic pregnancy substantiated by the culdoscope; in the others the diagnosis proved to be salpingitis or an ovarian pathology. No case in which ectopic pregnancy was excluded by the culdoscope was ever found to have it by subsequent observation or operation. In no instance where the culdoscopy indicated a tubal pregnancy did it prove otherwise.

Laparotomy would not have been absolutely necessary in all cases to rule out tubal pregnancy with certainty, simple observation in the hospital being sufficient in some instances. However, as a result of culdoscopy some patients were discharged promptly and with a feeling of safety. In those cases in which ectopic gestation was found, the patients were operated on before they sustained any significant blood loss, which made more conservative surgery possible. With the aid of the culdoscope such a satisfactory view of the ovaries and tubes can be obtained in most cases that the exact origin of bleeding probably can be detected and a correct decision for or against surgery properly made.

The largest number of culdoscopies were done for cases of menstrual disorders, mostly instances of functional uterine bleeding. Most of the patients in this group were scheduled primarily for a dilatation and curettage, and the opportunity existed for culdoscoping these patients. In at least 90 percent of these patients with a history of menometrorrhagia a hyperplastic endometrium and bilateral polycystic ovaries were found. However, in 3 patients who originally were thought to fall into this group of functional uterine

bleeding 3 very early unruptured and unsuspected tubal pregnancies were discovered. In culdoscoping several patients with a history of primary amenorrhea 2 cases of ovarian agenesis were discovered. One of these patients with primary amenorrhea was a 19-year-old girl who had been treated for years with various gonadotrophic preparations. Three of the patients in this group of functional uterine bleeding, in whom the basal temperature record and endometrial biopsy were inconclusive for determining whether the patients were ovulating, were found on culdoscopic examination to have a well-defined corpus luteum.

Culdoscopy can also prove helpful in the patient who has a small ovarian cyst. One would dislike to subject a patient to surgery and find only a moderate-sized simple follicular cyst that would probably ultimately disappear spontaneously; on the other hand it would be deplorable to permit a small neoplastic cyst to remain in the pelvis with ultimate serious consequences. Occasionally, ovarian enlargement persists even when it is not due to a neoplasm. The differentiation can frequently be made with the aid of the culdoscope. It was found that in almost every patient culdoscoped, the ovaries could be studied in great detail.

The author's experience with the culdoscope in these 96 cases has convinced him that this procedure is an asset in the study of many pelvic disorders. The information concerning the pelvic structures was so detailed and clear as to be unobtainable by any other means except laparotomy.

The only contraindication to culdосcopy is a fixed mass in the cul-de-sac. In his last 60 cases the author has avoided culdосcopying any patient with marked adhesions fixing the pelvic structures posteriorly, and as a result he has entered the cul-de-sac readily in every patient. To date, he has not punctured a viscus and has had no mortality and no serious complications. (Am. J. Obst. & Gynec., September '50, J. B. Teton)

* * * * *

Conservative Surgical Therapy of Brain Abscesses: Attention is called to a conservative method of surgical therapy of brain abscess. The best results yet reported are those of Macewen, who in 1893 advised drainage with a small tube. His patients all had chronic abscesses and 18 of the 19 recovered.

The method consists first of accurate localization of the abscess, using ventriculography if necessary. A trephine opening is made directly over the abscess, the dura is opened, and the exposed arachnoid and pia are cauterized so as to seal off the subarachnoid space and prevent meningitis. A needle is inserted into the abscess, with only enough pus for culture and smear removed, and the needle withdrawn. A size 10 catheter with multiple openings at the end is inserted and the contents of the abscess cavity carefully washed with penicillin until the return is clear. The cavity of the abscess is filled with penicillin

and complete closure of the wound is done. The catheter is sutured to the scalp and is brought out through the dressing in order to continue the irrigation of the abscess cavity and further instillation of the proper antibiotic as determined by the culture and smear of the pus removed. The abscess cavity is irrigated every 6 hours until the return is clear and then penicillin is allowed to run into the abscess cavity by gravity in order to completely inflate the cavity and prevent loculation of pus. If the antibiotic will not run in by gravity a lumbar puncture is done at the time in order to expand the abscess cavity and hence fill it with the antibiotic. This process is continued until the abscess cavity has completely disappeared and no more antibiotic runs into the cavity by gravity. The catheter is then withdrawn 1 cm. every other day until it is completely removed. This requires an average of 3 weeks from the time of operation, but with larger abscesses more time is required. In addition to the local treatment, the patient is given the proper antibiotic intramuscularly or by mouth.

Ten patients with brain abscesses, 2 cerebellar, 1 subdural and the rest cerebral, have now been operated upon by this method, with recovery in 8 cases. In 1 of the unsuccessful cases the abscess had already ruptured into the ventricle at the time of operation; and in the other, drainage was not adequate by the catheter method and the abscess was treated by marsupialization the day after the catheter method of therapy was attempted. In the 31 cases of brain abscesses treated at the Neurological Institute during the same period, but by other methods, the mortality rate was 45 percent. The catheter method of treatment affords drainage of the abscess with a minimum amount of cerebral trauma. This is especially valuable when the abscess extends into important areas of the brain, such as the motor or speech areas. The catheter method cannot be used in every case of abscess. If free exchange of fluid through the catheter cannot be obtained, this method of therapy is inadvisable. It is important that the proper antibiotic be used. This, of course, is determined by testing the sensitivity of the organism recovered from the pus to penicillin, streptomycin, and bacitracin. (J. Neurosurg., September '50, L. A. Mount)

* * * * *

An Automatic Drill for Craniotomy: A combined perforator and burr has been designed which makes a sheer, complete trephine opening requiring only 1 instrument and which will automatically stop drilling by allowing the driving force to be disengaged once the last shelf of inner table is removed at the base of the opening. This instrument, which can be driven either manually or by motor, makes a trephine opening speedily and safely with no injury to meninges or brain.

The drill is made of chrome-plated high-speed steel and weighs less than 3 oz. It is 2-1/2 in. in diameter. The drill is made in 3 functioning parts; the

1st an upper driving part that fits into the chuck of the drill; the 2d part is the center bore, which has the 3d part surrounding it as a collar--this is the counter bore. The 2 lower parts, center point and counter bore, are locked in the rotary plane at all times by a key, but move freely upon one another in the vertical plane. These 2 lower segments then rotate in synchrony.

The engagement and functioning of the drill are dependent upon pressure being maintained on the center bore by an intact skull. In 1 case it was found not to properly engage. Closer inspection of the skull in this case showed markedly abnormal bone, being the site of a metastatic sarcoma. It is felt that this provides a method to determine the soundness of the skull. Once the outer and inner tables of the skull are penetrated, regardless of their thickness, the pressure on the center bore is no longer maintained and it is free to advance $1/16$ in. only, and in thus doing automatically disengages the driving force of the bore and counter bore cutting surfaces. The counter bore, which is $1/8$ in. larger in diameter and trailing the center bore by $3/16$ in. in depth, obviously supports the drill and weight of the operator by not being able to advance farther into the completely cut opening. The caliber of the center bore or drill is uniform in its entirety. Thus, when the drill has trephined the skull and automatically stops drilling, the opening is clean of bone chips, has sheer shoulders and is completely through the skull. The drill produces large generous bone chips which can be used to fill defects or be replaced in the trephine opening if desired.

This drill works equally well manually or by power. The optimum speed is approximately 250 rev./min. and should not be placed in a power-driven chuck that exceeds this. Any power-driven chuck whose speed is regulated by a rheostat and can be adequately controlled by the surgeon is satisfactory. The drill performs well in the Luck Saw motor chuck, which can be autoclaved.

This automatic releasing drill has been used with satisfaction at the University Hospital, Baltimore, for 18 months. In all cases it has made excellent trephine openings without any trace of injury to the meninges or brain. It offers, moreover, the following advantages: (1) operating time is markedly reduced; (2) the safety factor is greatly increased; (3) the variability in the thickness of skull is no longer a threat to the surgeon; (4) the drill can be power-driven with safety; and (5) the drill produces complete adequate trephine openings with one instrument. (J. Neurosurg., May '50, G. W. Smith)

* * * * *

Progress in the Treatment of Trachoma with Chloromycetin (Chloramphenicol): Sulfonamides have been helpful in the treatment of trachoma (granular conjunctivitis). The treatment generally consists of the systemic use of the drug rather than local application to the eyes, the course of therapy lasting from 10 days to 2 weeks, allowing a rest period, and then repeating the process once

again. Improvement may be dramatic or gradual or, in some cases, require several months before the effects are noticeable. Under carefully controlled conditions the sulfonamides have been generally successful for the treatment of this disease.

Trachoma is a protean disease, varying in its manifestation and degree of infectiousness. It is characterized by an acute onset of conjunctival inflammation, dense infiltration, and papillary hypertrophy. In the early stages, a superficial inflammation of the cornea, particularly of the upper limbus region, some swelling of the lids, and increased lacrimation are present. In the patients studied, a follicular hypertrophy of the upper tarsal conjunctiva was present, pannus was noted in all cases, and capillary loops were seen within the matrix of this structure. In the later stages, corneal and conjunctival cicatrization were present, and early deformities (cicatricial entropion) were noted in some cases.

The effectiveness of chloramphenicol in the treatment of typhus fever, typhoid fever, Rocky Mountain spotted fever, and other diseases encouraged the authors to use it in the treatment of trachoma.

Diagnosis of the patients reported in this series was made by use of the slit lamp and biomicroscope, in addition to bacteriological and careful physical examinations. Because of conflicting standards of diagnosis, every effort was made to rule out doubtful cases. The subjects studied comprised a group of 14 patients, both adults and children, from different areas. All of the subjects exhibited corneal activity as evidenced by dilated pannus vessels and fluorescein staining punctate lesions, exhibited follicles, and complained of photophobia and lacrimation. "Scratchy" pain sensations on moving the lids were present in the majority of cases. In the upper tarsal conjunctiva there were, in most instances, red points consisting of bunches of dilated capillaries and trachomatous follicles. In 2 patients there was marked thickening of the tarsus and a mild degree of ectropion. Cultures and smears were taken from the eyes of all of these patients in order to ascertain the degree of secondary bacterial invasion. In no case was any purulent exudate noted.

Chloramphenicol was administered orally, 3 Gm. being given in divided doses at 3 hour intervals for the first 24 hours. The dose was then continued at a rate of 250 mg. every 3 hours. In some instances this procedure was modified, but it appeared necessary to administer the drug around the clock. The patients were hospitalized at bed rest in somewhat darkened rooms for 4 days, and protected from dust and wind. Within 24 hours most of the photophobia and lacrimation were materially reduced and within the next few days there was an approximate 80 percent reduction of opacities and inflammation.

There was a remarkable reduction in the inflammation processes and a clearing of the pannus. Examination at termination of treatment showed only

1 patient in whom further therapy appeared necessary. The patients have been observed for 3 months or longer without evidence of relapse. Thus, the benefits observed seem to be permanent.

It is quite possible that in some cases the combined use of chloramphenicol and sulfonamide might be indicated, particularly if secondary bacterial infection is present. To date the combined treatment has not been tried. (Am. J. Trop. Med., September '50, M. J. Pijoan et al.)

* * * * *

Oral Treatment of Neurosyphilis with Aureomycin: Twelve patients with various types of neurosyphilis were treated with aureomycin in total doses varying from 50 to 90.5 Gm. In all but 1 of the 12 cases there was satisfactory and rapid clinical improvement. In 1 case of advanced paresis there was continued mental deterioration in spite of treatment, even though the examinations of the cerebrospinal fluid showed continuous improvement. In all but 1 case, rapid and great improvement was noted on examination of the cerebrospinal fluid, particularly in the cell count and values for protein. The colloidal gold reaction and complement fixation reaction responded more slowly.

The general tonic effects noted previously by patients treated with penicillin occurred in the patients treated with aureomycin as well. Untoward reactions involving the gastrointestinal tract were frequent; often, decrease of the dose permitted patients to continue treatment without discomfort. It was necessary to discontinue treatment of only 2 of 15 patients for this reason. Reactions of photosensitivity were seen in 2 cases.

It was concluded that the early results achieved from aureomycin are equivalent to those achieved from penicillin. Aureomycin by mouth is indicated for those patients with neurosyphilis who have a resistance to, or hypersensitivity to, penicillin. (Am. J. Syph., Gonorr. & Ven. Dis., September '50, R. R. Kierland and P. A. O'Leary)

* * * * *

Tularemia in Man from a Domestic Rural Water Supply: Since 1942 contamination of numerous Montana streams with *P. tularensis*, often persisting for months, has been repeatedly demonstrated at the Rocky Mountain laboratory. In most instances, the presence of the organism in water has been associated with the occurrence of tularemia in beavers and muskrats inhabiting the infected streams and ponds.

Cases of tularemia have occurred among many persons who skinned or handled diseased animals, but there has been little evidence of human infection resulting from direct contact with water contaminated by tularemia organisms.

The occurrence in Gallatin County, Montana, of 4 cases of tularemia associated with one domestic water supply under circumstances which appear to preclude other likely sources of infection is now reported.

In the summer of 1949, 2 patients with tularemia, in whom the portal of entry appeared to be the throat, were treated. Neither patient exhibited an external initial lesion of any kind, and neither gave a history of close contact with wild rodents, wild rabbits, or other animals that would be likely sources of infection. Both were rural residents who, while working in their gardens, had some exposure to soil and weeds contaminated by mice. Both had used potatoes from a mouse-infested storage cellar. The patients were related and visited each other frequently. As they also experienced similar clinical courses except for the time of onset, a common source of infection in food or water supply was suspected.

It was demonstrated in 2 consecutive tests that the water supply at the residence of one of the patients was contaminated. This water supply had remained practically unchanged for 20 years. When a survey was made of users of this water, it was found that two previous residents had experienced severe and persistent sore throats and protracted illness of undiagnosed etiology. Both exhibited a positive agglutination titer for P. tularensis in November 1949. Three others gave significantly positive agglutination titers but recalled no episode of illness suggestive of tularemia. One other former resident showed a low titer of doubtful significance. Two domestic animals on the farm also had significant titers for P. tularensis. (Pub. Health Rep., 22 September '50, W. L. Jellison et al.)

* * * * *

Membership in U. S. Naval Institute: The Surgeon General of the Navy has recently received communications from the President of the United States Naval Institute, Vice Admiral R. B. Carney, USN, and the Secretary-Treasurer, Captain R. H. Rice, USN, inviting officers of the medical department of the Navy not only to become members of the Institute but also to submit pertinent articles for publication in the Proceedings of the U. S. Naval Institute, the official publication of the Institute. It is pointed out that the mission of the Naval Institute is not only the advancement of professional, literary, and scientific information in the Navy but also the dissemination of such information to the Navy and the world at large. For accepted articles, the Naval Institute Proceedings will pay promptly upon acceptance rates varying from 2-1/4¢ to 3-1/2¢ per word. It is not necessary for a contributor to be a member of the Naval Institute for his article to receive consideration. The Institute suggests that authors submitting medical articles for publication write in terms that any layman can understand, rather than in professional terms. The articles on medical subjects should be written in terms and style appropriate for use in any general magazine, such as The Reader's Digest or Collier's. Those officers interested in joining the United States Naval Institute and/or submitting articles for publication should forward requests and articles to the U. S. Naval Institute, Annapolis, Md. Membership dues (including Proceedings) are \$3.00 per year.

* * * * *

Food Service Course for MSC And WOHC Officers: Applications are desired from officers of the Medical Service Corps (Administration and Supply Section), and Commissioned Warrant and Warrant Officers, Hospital Corps, U. S. Navy, who are desirous of attending a course of instruction in food service at the Army Quartermaster School, Quartermaster Center, Fort Lee, Virginia. The next class, which is to be of four months duration, will convene on 22 January 1951.

Requests should be addressed to Chief, Bureau of Medicine and Surgery, Navy Department, Washington 25, D. C., attention Code 345, and must be received prior to 15 November 1950 in order to receive consideration. Requests may be made by dispatch if the time element involved indicates such action. (Professional Div., BuMed)

* * * * *

Study Material for Advancement in the Hospital Corps: In order to acquaint all Hospital Corpsmen with sources of study material, the following is recommended as a useful guide in preparing for advancement to the various ratings in the Hospital Corps:

Manual of Qualification for Advancement in Rating, U. S. Navy 1947.
U. S. Navy Regulations, 1948.

- Bureau of Naval Personnel Manual, 1948.
 Manual of the Medical Department, U. S. Navy, 1945 and 1948.
 General Orders, U. S. Navy.
 Naval Courts and Boards.
 Navy Department Bulletins (AS&SL).
 Bulletin of Bureau of Medicine and Surgery Circular Letters (NavMed 937).
 Court Martial Orders, U. S. Navy.
 U. S. Navy Uniform Regulations, 1947.
 The Bluejackets Manual, 1946.
 U. S. Navy Security Manual for Classified Matter (OpNav 32-P-1100).
 U. S. Navy Correspondence Manual (NavExos P388).
 Medical Department Administration, February 1949 (NavPers 10847).
 Instructions for the Navy Personnel Accounting System.
 U. S. Navy Filing Manual.
 Revised Hospital Accounting Instructions (NavMed P-1296).
 Handbook of the Hospital Corps, 1939.
 Handbook of the Hospital Corps, 1949.
 Drillbook for the Hospital Corps, U. S. Navy, 1942.
 Cross Index System for Clinical Records (NavMed P-1193).
 Individual Statistical Report of Patients (NavMed-F) and NavMed P-1313.
 Manual on the Geneva Convention and Naval Medical Liaison (NavMed Form 903).
 Joint Armed Forces Statistical Classification and Basic Diagnostic Nomenclature of Diseases and Injuries (NavMed P-1294).
 U. S. Pharmacopoeia.
 U. S. Dispensatory.
 National Formulary.
 Navy Training Course for HMC (NavPers 10413).
 Navy Training Course for HM1 (NavPers 10415).
 Navy Training Course for HM2 (NavPers 10417).
 Navy Training Course for HM3 and HN (NavPers 10419).
 Study Guide for Dentalman (NavPers 10675).
 Study Guide for Dental Technician 3 (NavPers 10676).
 Study Guide for Dental Technician 2 (NavPers 10677).
 Study Guide for Dental Technician 1 and Chief (NavPers 10678).
 Mathematics (NavPers 10620).
 Handbook of Dental Technologists, General, 1945.
 Handbook for Dental Prosthetic Technicians, 1948.
 Ritter Sales Manual.
 Dental Repair School Notes.
 Dental Prosthetic School Notes.
 General Training Course for Non-Rated Men (NavPers 10601).
 General Training Course for PO1 and CPO (NavPers 10602).
 General Training Course for Petty Officers, Part I, (NavPers 10602-A).
 General Training Course for PO3 and PO2 (NavPers 10603).

Introduction to Airplanes.
Education and Training (NavPers 10827).
Personnel Administration (NavPers 10848).
Manual of Enlisted Navy Job Classification (NavPers 15105).
Handbook of Damage Control (NavPers 16191).
Shipboard Training Manual (NavPers 90110).
RAD 8 (Radar Manual).

For further information consult your Training or Hospital Corps Personnel Officer. (Professional Div., BuMed)

* * * * *

Registry of Leprosy: The Leonard Wood Foundation is sponsoring a new Registry of Leprosy at The American Registry of Pathology, a department of the Armed Forces Institute of Pathology, Washington 25, D. C., under the auspices of the National Research Council. The purpose of this Registry is to promote the study of the pathology of leprosy based on material contributed by leprologists and pathologists throughout the world. Since there is a considerable degree of variation in the behavior of the disease in different parts of the world, the concentration of material in a single center should permit more adequate evaluation of the scope and significance of such variation.

Contributors should forward not only pathologic specimens in the form of slides, blocks or fixed tissues, but also complete identification of the patient to facilitate follow-up studies and an adequate abstract of the clinical data including details of therapy. Clinical photographs, especially of the individual lesion excised for study, are desired for clinical pathological correlation.

Communications should be addressed to Director, Armed Forces Institute of Pathology (Att: American Registry of Pathology), Washington 25, D. C.

* * * * *

List of Recent Reports Issued by Naval Medical Research Activities:

Naval Medical Research Institute, NNMC, Bethesda, Maryland.

Studies in Diffusion Respiration, 14 June 1950, NM 001 056.03.01.

Fluorescein Studies of Circulation Time in Monkeys with the Lucite Calvarium, 11 August 1950, NM 007 081.07.04 (formerly NM 013 012).

Naval Medical Field Research Laboratory, Camp Lejeune, North Carolina.

Bare Skin Hazard from Frostbite in Escape from Aircraft, September 1950, NM 006 014.02.02 (IID).

* * * * *

FROM THE NOTE BOOK

1. LTJG Sara J. Griffin, NC, USN Ret., a Navy nurse amputee, has been recalled to active service for special "inspirational" duty at the Navy Amputee Center, Naval Hospital, Oakland, California. Miss Griffin is the first Navy nurse amputee to ever serve on active duty. It is felt that Miss Griffin can render a unique and valuable service to the Navy and to her country, and that her assignment to duty will be an inspiration to amputees being rehabilitated at the Oakland Hospital. (PIO, BuMed, 4 October 1950)

2. The Fourth General Assembly of the World Medical Association will be held in New York City, October 16-20, 1950. It is the first time that the Association as a whole will meet in the United States.

3. The use of aureomycin successfully in Reiter's disease has been reported. (Arch. Dermat. & Syph., September '50, H. Korb and E. A. Brown)

4. A report from the Naval Medical Field Research Laboratory, Camp Lejeune, N. C., indicates that fresh whole milk can be concentrated by means of a vacuum without altering the flavor of the milk and can be kept in a frozen state for an indefinite period of time and then reconstituted merely by the addition of the necessary amount of water. (NMFRL, Camp Lejeune, N. C., Proj. No. NM 005 052.10.02, LCDR L. P. Eisman, MSC, USN)

5. A pilot study of the Navy's Educational Program on Venereal Disease is reported. (Am. J. Syph., Gonorr. & Ven. Dis., September '50, C. L. Vaughn and A. D. Freiberg)

6. The Surgeon General of the Navy, RAD C. A. Swanson, MC, USN, addressed the class of 1925 University of Michigan Medical School on 29 September 1950. The subject of the Admiral's address was "Opportunity." (PIO, BuMed, 27 September 1950)

7. Captain Waltman Walters, MCR, Chief of Surgery, Mayo Clinic, Rochester, Minn., opened the 1950-1951 series of guest lectures at the Naval Medical School, National Naval Medical Center, Bethesda, Md., on 29 September 1950. Captain Walters' subject for discussion was "Surgery of the Stomach with an Evaluation of Vagotomy." These guest lectures are open to members of the local Medical societies and faculties of local medical schools, as well as medical officers of the Armed Forces, Public Health, Veterans Administration, and Indian Affairs Bureau. (PIO, BuMed, 27 September 1950)

8. Captain M. M. Maxwell, DC, USN, will present an essay on "Facial Fractures" at the meeting of the American Society of Oral Surgeons, Atlantic City, N. J., on 25 October 1950. (PIO, BuMed, 27 September 1950)
9. A conference of health officials of the Caribbean area was held at Kingston, Jamaica, from August 28 to 30, 1950, regarding the coordination of rabies control within the area. The purpose of the conference was to review the rabies situation, study control measures now in effect, exchange information on the latest techniques of diagnosis, control, and eradication of rabies, and to make recommendations for concerted anti-rabies measures among the governments in the Caribbean area. Officials from Jamaica, Dominican Republic, Haiti, Puerto Rico, Trinidad, British West Indies, and the U. S. attended the conference. (PIO, Pan American Sanitary Bureau, 25 September 1950)
10. The February 1950 British volume of the Journal of Bone and Joint Surgery contains particularly good reading on arteriography in bone tumors by R. D. Santos, Lisbon; and on congenital torticollis by K. F. Huebert, London.
11. Allergic Reactions from the Ingestion of Beet Sugar (Sucrose) and Monosodium Glutamate of Beet Origin is discussed in the Journal of Laboratory and Clinical Medicine, September 1950, by T. G. Randolph and J. P. Rollins.
12. Observations on the intravenous administration of saccharated oxide of iron in human beings are presented in the Journal of Laboratory and Clinical Medicine, September 1950, by D. L. Harrigan et al.
13. The death rate in 1949 was 1.80 per 1,000 average strength, the lowest ever experienced in the 100 years of recorded Navy death rates. (Stat. Navy Med., October 1950)
14. The joint utilization of hospital facilities by the 3 armed services continues to expand. At the beginning of FY 1950 the total number of patients involved was 796, at the end of the fiscal year was 1,100: 827 Army and Air Force patients in Naval Hospitals, 273 Navy patients in Army and Air Force Hospitals. (Stat. Navy Med., October 1950)

* * * * *

SECNAV LETTER, Op213C/cjh, Serial 2678P21

30 August 1950

To: All Ships and Stations

Subj: Establishment of U. S. Naval Hospital, Yokosuka, Japan

1. The following activity is hereby established under a commanding officer:

U. S. Naval Hospital
Yokosuka, Japan
(Mail Address)
Commanding Officer
U. S. Naval Hospital
Navy Number 3923
Fleet Post Office
San Francisco, Calif.

3435-950

This activity consists of the facilities of the present Dispensary, Fleet Activities, Yokosuka, Japan. It is under the military command and coordination control of Commander, Fleet Activities, Yokosuka, Japan, and under the management control of the Bureau of Medicine and Surgery.

2. Holders of Basic Naval Establishment Plan, Fiscal Year 1950, renumber present paragraph 7244c as paragraph 7244d and add new paragraph 7244c as follows:

7244c - U. S. Naval Hospital, Yokosuka, Japan.

3. Bureaus and offices concerned take necessary action.

-SecNav Francis P. Matthews

* * * * *

BUMED CIRCULAR LETTER 50-106

28 September 1950

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Optometric Fabrication; Establishment of Specialization Course in

Ref: (a) Catalog of Hospital Corps Schools and Courses

1. A specialization course for enlisted personnel of the Hospital Corps in Optometric Fabrication is hereby established at the U. S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland, and shall be made a part of reference (a).

2. The length of the course shall be of ten (10) months duration and will convene on or about 15 October 1950.

3. The number, ratings, and service requirements of students assigned will be incorporated in Bureau of Naval Personnel quota orders. Hospital corpsmen successfully completing the prescribed course of instruction will be issued Certificates of Special Instruction and officially designated as Opticians (OPT).

-C. A. Swanson

* * * * *

BUMED CIRCULAR LETTER 50-107

28 September 1950

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Environmental Sanitation Technic: Establishment of Course of Instruction in

Ref: (a) Catalog of Hospital Corps Schools and Courses

1. A specialization course for enlisted members of the Hospital Corps in Environmental Sanitation Technic is hereby established at the U. S. Naval Hospital, Oakland, California, and shall be made a part of reference (a).

2. The length of the course shall be of four (4) months duration and will convene on or about 1 November 1950.

3. The number, ratings, and service requirements of students assigned will be incorporated in Bureau of Naval Personnel quota orders. Hospital corpsmen successfully completing this course of instruction will receive Certificates of Special Instruction and will be officially designated as Environmental Sanitation Technicians.

-C. A. Swanson

* * * * *

BUMED CIRCULAR LETTER 50-108

28 September 1950

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Naval Aviation Observer (Controller); Physical Standard for

Ref: (a) BuPers C/L 138-50; NDB 31 Aug 1950, 50-680

1. Reference (a) establishes the designation Naval Aviation Observer (Controller) as a new designation in Class II aviation personnel.
2. The physical standards for Naval Aviation Observer (Controller) are the same as those for Naval Aviation Observer (Technical), as specified in Manual of the Medical Department, paragraph 21141.2(a).

-C. A. Swanson

* * * * *

BUMED CIRCULAR LETTER 50-109

2 October 1950

From: Chief, Bureau of Medicine and Surgery
To: National Naval Medical Center and All Naval Hospitals (Continental)
Subj: Survey of Supervisory Mechanical Service Ratings

Ref: (a) NCPI 250.7-7f
(b) NCPI 250.7-7e
(c) NCPI 160.3-7

- Encl: (1) Instructions for submission of information on the organization and duties of the civilian supervisory staff, naval hospital maintenance divisions.
(2) Tentative guides for designation of supervisory mechanical ratings at naval hospitals.

This letter with enclosures of instructions proposes a change in the provisions of NCPI 250 regarding the rating structure of the supervisory mechanical forces of Naval Hospitals to provide a more complete and appropriate supervisory mechanical title structure for use at Naval Hospitals. A complete report is requested from all Continental Naval Hospitals and the National Naval Medical Center. The material contained in the report should be in the Bureau no later than 31 October 1950. This circular letter will not be printed in the Navy Department Bulletin.

* * * * *

BUMED CIRCULAR LETTER 50-110

3 October 1950

From: Chief, Bureau of Medicine and Surgery
To: BUMED Management Control Activities (as indicated)

Subj: Fiscal Services Work Measurement Program

Ref: (a) BUMED Circular Letter No. 49-100 of 17 August 1949
(b) BUSANDA letter P20-1(DF-12) of 25 July 1949
(c) BUMED letter BUMED-2325, A3-4/EN10 of 17 July 1950

Encl: (1) Definitions and Reporting Instructions
(2) 50 copies of NAVMED Form 1322
(3) Suggested local form

1. The Fiscal Work Measurement Program inaugurated by reference (a) has been revised and reference (a) is hereby cancelled and superseded.
2. Disbursing offices at naval hospitals have been submitting separate fiscal work measurement reports to the Bureau of Supplies and Accounts in accordance with instructions promulgated by reference (b). The Assistant Comptroller, Accounting, Audit and Finance, Navy Department, has prescribed a revised Fiscal Services Work Measurement Program for the entire Naval Shore Establishment. This revision makes each bureau and office of the Navy Department responsible for collecting data on all fiscal functions performed at activities under its management control. For this reason, disbursing offices located at BUMED managed activities shall include the disbursing office fiscal workload and staff in the report submitted by the activity to the Bureau of Medicine and Surgery.
3. Revised definitions and instructions for the guidance of Medical Department field activities in accumulating fiscal workload and staffing data and in preparing monthly reports for submission to this Bureau are contained in enclosure (1). These revised definitions and instructions are effective as of 1 July 1950.
4. The first reports required by the Bureau under this revised Fiscal Services Work Measurement Program are for the months of July, August, and September 1950 (a separate report for each month) and shall be forwarded to reach the Bureau not later than 15 October 1950. Data accumulated in accordance with paragraph 3 of reference (c) should prove of assistance in compiling the July, August, and September reports. Reports for succeeding months shall be submitted to reach the Bureau within 15 days after the end of the month being reported, in order that the Bureau may be able to meet deadlines for submitting consolidated reports to the Assistant Comptroller, Accounting, Audit and Finance.
5. The supply of report forms forwarded herewith as enclosure (2) is considered sufficient for the current fiscal year since only the original of each monthly report is to be submitted. If an additional supply is required, request should be made to the Bureau by letter.

6. Data accumulated and submitted by field activities must be accurate since this data is required by the Bureau of the Budget in justification of budget estimates. This data is used by the Bureau of the Budget to evaluate the effectiveness of fiscal operations and also for determination as to the maximum number of personnel to be authorized for fiscal services during the year.

7. This program will: (a) point out those fiscal subfunctions in which simplification or other improvements can be made to increase operating effectiveness; (b) provide a check as to the results of improvements which have been installed; (c) permit analysis of the effectiveness of various types of fiscal organizations; and, (d) furnish a basis for analysis of performance in comparable operations at various activities. In addition, data accumulated through this program will prove useful locally in scheduling the use of manpower and facilities, and in determining, evaluating, and justifying personnel requirements.

8. Enclosure (3) is a suggested form for use by personnel engaged in the fiscal subfunctions to accumulate a record of the work performed and the time expended in performing the various subfunctions. It is recommended that this or a similar form be utilized for recording of this data by the individuals and then forwarded to a central point for consolidation into the monthly report.

-C. A. Swanson

* * * * *

BUMED CIRCULAR LETTER 50-111

4 October 1950

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Whole Blood and Blood Derivatives Program for the Navy Department

Ref: (a) BuMed Circular Letter No. 46-133 of 13 Sept 1946, subj: Professional Blood Donors, Payment for Services; Bureau Policy Concerning.

1. A recent statement of policy issued by the Department of Defense provides that blood donations within the Department of Defense be on a voluntary basis and without remuneration to the donor and that personnel on active duty shall not receive remuneration from appropriated funds for acting as blood donors, except in emergencies or in areas where volunteer donor services are not available.

2. Inasmuch as this policy is in agreement with the Bureau of Medicine and Surgery volunteer blood program as promulgated by reference (a), the provisions of reference (a) continue in effect.

-C. A. Swanson

BUMED CIRCULAR LETTER 50-112

4 October 1950

From: Chief, Bureau of Medicine and Surgery
To: CO's, All Naval Hospitals, CLUSA

Subj: Members Awaiting SecNav Action Upon Proceedings and Recommended Findings of Physical Evaluation Boards; Interim Disposition in the Cases of

Ref: (a) BuPers Circular Letter 14-50, paragraph 3(D), NDB Item No. 50-64
(b) BuPers Ltr., P19-2, Pers-3110-jt, 15 Mar 1950 to ComSIX (info all concerned), Subj: Disposition of officer personnel who have appeared before Physical Evaluation Board

1. It has been noted that in a number of instances members coming within the purview of the provisions of paragraph 3(D) of reference (a) have been retained unnecessarily in hospitals. From the nature of inquiries received in the Department it appears that full use of reference (a) is not being realized possibly because of an erroneous interpretation of its provisions. In order to clarify the issue and permit a more liberal application of the aforementioned reference, amplifying information and instructions are supplied herewith.

2. Members who are placed in an awaiting-orders status pending action on disability retirement proceedings for any period in excess of the number of days of earned leave are entitled to full pay and allowances for the entire period they are in an awaiting-orders status. It is not necessary however for the member to have earned leave to his credit to be placed in an awaiting-orders status.

a. The addressees may request that the Commandant place enlisted members in an awaiting-orders status when all of the following conditions have been met:

(1) A physical evaluation board has arrived at a recommended finding that the member is unfit to perform the duties of his rating.

(2) The commanding officer of the naval hospital considers that further hospitalization and treatment are not required.

(3) The commandant considers that the services of the member may not be utilized to advantage.

(4) The member has agreed to permit any accumulated or earned leave to be charged-off while in such status.

b. The procedure for placing officers in an awaiting-orders status is set forth in reference (b).

3. Where the physical evaluation board does not recommend awaiting-orders status as an interim disposition measure and a situation later develops which makes such action desirable the local command having custody of such member

may on its own initiative request the commandant to take the necessary action to place the member in an awaiting-orders status.

4. Commanding officers of naval hospitals who retain or readmit members for further treatment after submission of a report by a clinical board and when such members subsequently become fit to perform limited duty while awaiting action upon the proceedings and recommended findings of a physical evaluation board may request the commandant to transfer such personnel to limited duty within the district.

5. It is intended that addressees maintain the necessary liaison to permit of the maximum utilization of the services of members concerned who may be assigned to perform limited duty; to effect the maximum reduction in hospital stay which is consistent with service needs; and to make full use of existing authority to place members in an awaiting-orders status.

-C. A. Swanson

* * * * *

BUMED CIRCULAR LETTER 50-113
ARMY REGULATIONS 40-441
AIR FORCE REGULATION 160-62

DEPARTMENTS OF THE ARMY,
THE NAVY, AND THE AIR FORCE
WASHINGTON 25, D. C.

JOINT LETTER

25 September 1950

MEDICAL SERVICE

JOINT UTILIZATION OF ARMED FORCES MEDICAL LABORATORIES AND
EPIDEMIC DISEASE CONTROL UNITS

	Paragraph
General	1
Types of service	2
Requests for services	3
Epidemiologic investigations	4
List of units, their location and military control	5

1. General.--In the interest of efficiency and economy, the services of area medical laboratories and epidemic disease control units of the Departments of the Army, Navy, and Air Force will be made available, upon request, to all installations of the three Departments. The service furnished by such facilities will be on a nonreimbursable common service basis with the exception of the travel and per diem expenses of personnel of Army or Air Force laboratories furnishing services to activities of the Navy and the same expenses of personnel of the Navy epidemic disease control units furnishing services to activities

of the Army and the Air Force. In these instances there will be reimbursement provided by the Department receiving the services to the extent of the required travel and per diem, except that the Army will reimburse the Navy for services to the Air Force when such services have had the prior approval of the Army.

2. Types of service.--The types of service available from these units conform to a general pattern within each of the individual services. Specific laboratories or units, however, offer specialized procedures depending on their mission. Senior medical officers should familiarize themselves, either by personal visit or by correspondence, with the facilities offered by units of the other services located in their vicinity. The general types of service available consist of the following:

a. Army area medical laboratories are prepared to perform all types of clinical laboratory procedures as well as examination of meat, dairy products, and other foods, and may also be called upon to conduct epidemiologic investigations and to provide limited training for laboratory officers and technicians in special fields. These laboratories are also prepared to furnish test specimens to other laboratories for evaluation of techniques and technicians.

b. Navy epidemic disease control units conduct epidemiologic investigation, special sanitary surveys, and perform supporting laboratory examinations but do not perform routine general clinical laboratory tests.

3. Requests for services.--Requests for services will be governed ordinarily by geographical location and by facilities or services available. Where laboratory tests on submitted specimens are desired, the senior medical officer of an installation may make a direct request to the commanding officer of one of the units listed in paragraph 5. Such request will be honored as facilities permit. Requests for services involving travel of personnel between Departments will be submitted, through channels, to the Department of the requesting installation. Direct telephone or telegraphic request may be made in an emergency, with later written confirmation to be submitted through channels. Approval will rest with the Surgeon General of the Department upon whom the request is made.

4. Epidemiologic investigations.--Reports of epidemiologic investigations will be made, through proper channels, to The Surgeon General of the Department furnishing the service, and a copy of the report will be sent to the senior medical officer of the installation requesting the service.

5. List of units, their location and military control.

Unit

Under military control of--

ARMY:

First Army Area Medical Laboratory
90 Church Street, New York, New York

Commanding General, First Army,
Governors Island, New York

Second Army Area Medical Laboratory
Fort George G. Meade, Maryland

Commanding General, Second Army,
Fort George G. Meade, Maryland

Third Army Area Medical Laboratory
Fort McPherson, Georgia

Commanding General, Third Army,
Fort McPherson, Georgia

Fourth Army Area Medical Laboratory
Brooke Army Medical Center
Fort Sam Houston, Texas

Commanding General, Brooke Army
Medical Center, Fort Sam Houston,
Texas

Fifth Army Area Medical Laboratory
Fort Sheridan, Illinois

Commanding General, Fifth Army,
1660 East Hyde Park Boulevard,
Chicago, Illinois

Sixth Army Area Medical Laboratory
Fort Baker, California

Commanding General, Sixth Army,
Presidio of San Francisco,
San Francisco, California

Branch, Sixth Army Area Medical
Laboratory
Fort Lewis, Washington

Commanding General, Sixth Army,
Presidio of San Francisco,
San Francisco, California

4th Medical Laboratory
Heidelberg, Germany

Commander-in-Chief
European Command
APO 403, c/o Postmaster New York,
New York

Hawaiian Medical Laboratory
Schofield Barracks, Hawaii

Commanding General
United States Army, Pacific
APO 958, c/o Postmaster
San Francisco, California

406th Medical General Laboratory
Tokyo, Japan

Commander-in-Chief
Far East
APO 500, c/o Postmaster
San Francisco, California

NAVY:

U. S. Navy Epidemic Disease Control
Unit #2
Receiving Station, Norfolk 11, Va.

Commandant
5th Naval District
Naval Base, Norfolk, Virginia

U. S. Navy Epidemic Disease Control Unit #3 Marine Barracks, Camp Lejeune, N. C.	Commanding General Marine Barracks Camp Lejeune, North Carolina
U. S. Navy Epidemic Disease Control Unit #4 Naval Training Center Great Lakes, Illinois	Commandant 9th Naval District Naval Training Center Great Lakes, Illinois
U. S. Navy Epidemic Disease Control Unit #5 Naval Hospital, San Diego, California	Commandant 11th Naval District Naval Base, San Diego, California
U. S. Navy Epidemic Disease Control Unit #6 Pearl Harbor Naval Shipyard Pearl Harbor, Territory of Hawaii	Commandant 14th Naval District Fleet Post Office 128 San Francisco, California

BY ORDER OF THE SECRETARIES OF THE ARMY, THE NAVY, AND
THE AIR FORCE:

OFFICIAL: EDWARD F. WITSELL Major General, USA The Adjutant General	J. LAWTON COLLINS Chief of Staff, United States Army
OFFICIAL: CHARLES WELLBORN, JR. Deputy Chief of Naval Operations (Administration)	C. A. SWANSON Rear Admiral (M. C.) Chief of the Bureau of Medicine and Surgery
OFFICIAL: L. L. JUDGE Colonel, USAF Air Adjutant General	HOYT S. VANDENBERG Chief of Staff, United States Air Force

* * * * *

BUMED CIRCULAR LETTER 50-114

10 October 1950

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: BuMed Circular Letters; Cancellation of

1. The following BuMed circular letters are canceled for the reasons indicated:

<u>Cir Ltr</u>	<u>NDB Issue and No.</u>	<u>Reason</u>
49-22	Jan-June 1949, 49-117, p. 77	Served its purpose
49-79	Jan-June 1949, 49-79, p. 83	Outdated
49-125	July-Dec 1949, 49-690, p. 117	Served its purpose
50-2	15 Jan 1950, 50-19, p. 11	Covered by ManMedDept and BuPers Cir Ltr 84-50

-C. A. Swanson

* * * * *

BUMED CIRCULAR LETTER 50-115

10 October 1950

From: Chief, Bureau of Medicine and Surgery
To: Holders of the Bulletin of BuMed Circular Letters

Subj: BuMed Circular Letters; Cancellation of

1. The following BuMed circular letters are canceled for the reasons indicated:

44-40	Served its purpose
47-110	No longer required

-C. A. Swanson

* * * * *

NAVY DEPARTMENT
BUREAU OF MEDICINE AND SURGERY
WASHINGTON 25, D. C.

OFFICIAL BUSINESS

Permit No. 1048
NavMed-369 - 10/50

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE. \$300